2006 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Salt Dome – City of Durham Public Works Department
Address: 1840 Camden Avenue Durham NC
Proposed Use: Salt Storage
Owner/Authorized Agent: Tim Jackson-Proj. Mgr. **Phone #:** 919-560-4236 **E-Mail:**
Owned By: ☒ City/County ☐ Private ☐ State
Code Enforcement Jurisdiction: ☒ City ☐ County ☐ State

LEAD DESIGN PROFESSIONAL:

Designer	Firm	Name	License	Telephone #	E-Mail
Architectural:	RND Architects	Charles Nickelson	7835	(919) 490-1266	cnickelson@rndpa.com
Civil:	Stewart Engineering	Roy Lorenzen	18824	3808750	lorenzen@stewart-eng.com
Electrical:	Edmondson Engineers	Mike Edmondson	5258	919-544-1936	michael@edmondson @edmondsonengineers.com
Fire Alarm:					
Plumbing:	Edmondson Engineers	Mike Edmondson	5258	919-544-1936	
Mechanical:	Edmondson Engineers	Mike Edmondson	5258	919-544-1936	
Sprinkler/Standpipe:					
Structural:					
Rtng Walls >9' Tall:					
Other:					

2006 EDITION OF NC CODE FOR: ☒ New Construction ☐ Addition ☐ Upfit
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair
CONSTRUCTED: (Year) **ORIGINAL USE:** **RENOVATED:** (Year) **CURRENT USE:**

BUILDING DATA:

Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A ☐ I-B ☐ II-B ☐ III-B ☒ V-B
Mixed construction: ☒ No ☐ Yes Types
Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☒ Yes **Flood Hazard Area:** ☐ No ☐ Yes
Building Height: 42.75 Feet; Number of Stories: 1
Mezzanine: ☒ No ☐ Yes
Gross Building Area: 3,887

Floor	Existing (sq ft)	New (sq ft)	Sub-total (sq ft)
6th Floor:			
5th Floor:			
4th Floor:			
3rd Floor:			
2nd Floor:			
Mezzanine:			
1st Floor:		3,887	
Basement:			
TOTAL:			

ALLOWABLE AREA:

Primary Occupancy: Assembly: ☐ A-1, ☐ A-2, ☐ A-3, ☐ A-4, ☐ A-5;
☐ Business; ☐ Educational; Factory: ☐ F-1 Moderate, ☐ F-2 Low;
Hazardous: ☐ H-1 Detonate, ☐ H-2 Deflagrate, ☐ H-3 Combust, ☐ H-4 Health, ☐ H-5 HPM;
Institutional: ☐ I-1, ☐ I-2, ☐ I-3, ☐ I-4, - I-3 Condition: ☐ 1, ☐ 2, ☐ 3, ☐ 4, ☐ 5;
☐ Mercantile; Residential: ☐ R-1, ☐ R-2, ☐ R-3, ☐ R-4;
Storage: ☒ S-1 Moderate, ☐ S-2 Low, ☐ High-piled;
☐ Utility and Miscellaneous; ☐ Parking Garage ☐ Open, ☐ Enclosed, ☐ Repair Garage
Secondary Occupancy:
Special Uses: ☐ 402, ☐ 403, ☐ 404, ☐ 405, ☐ 406, ☐ 407, ☐ 408, ☐ 409, ☐ 410, ☐ 411, ☐ 412, ☐ 413, ☐ 414, ☐ 415, ☐ 416, ☐ 417, ☐ 418, ☐ 419, ☐ 420, ☐ 421
Special Provisions: ☐ 508.2, ☐ 508.3, ☐ 508.4, ☐ 508.5, ☐ 508.6, ☐ 508.7, ☐ 508.8
Mixed Occupancy: ☒ No ☐ Yes Separation: 2 Hr. Exception:
☐ Incidental Use Separation (302.1.1)
This separation is not exempt as a Non-Separated Use (see exceptions).
☐ Non-Separated Use (302.3.1)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (302.3.2) – See below for area calculations.
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed one (1).

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1.0$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad} \leq 1.00$$

Story No.	Description And Use	(A) Bldg Area per Story (Actual)	(B) Table 503[3] Area	(C) Area for Frontage Increase[1]	(D) Area for Sprinkler Increase[2]	(E) Allowable Area or Unlimited[3]	(F) Maximum Building Area[4]
1	S-1	3,887	9,000	6,750	15,750	15,750	15,750

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 237 (F)
b. Total Building Perimeter = 237 (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30 (W)
e. Percent of frontage increase $I_f = 100 [F/P - 0.25] \times W/30$ = 75 (%)
[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent
[3] Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507); Group A motion picture (507.9); Malls (402.6); and H-2 aircraft paint hangers (507.7).
[4] Maximum Building Area = total number of stories in the building x E (506.4).
[5] The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT:

	Allowable (Table 503)	Increase For Sprinklers	Shown On Plans	Code Reference
Type of Construction	Type V-B		Type V-B	Table 503
Building Height in Feet	19 (Avg Ht.) Feet	H + 20' = 39' Feet	15 Feet	Table 503
Building Height in Stories	1 Stories	Stories + 1 = 3	1 Stories	

FIRE PROTECTION REQUIREMENTS:

Life Safety Plan Sheet #, if Provided G-2

Building Element	Fire Separation Distance (Feet)	Rating (Hours) Req'd	Rating (Hours) Provided (w/ * Reduction)	Detail # / Sheet #	Design # For Rated Assembly	Design # For Rated Penetration	Design # For Rated Joints
Structural Frame (including columns, girders, trusses):		0	0				
Bearing Walls:		0	0				
Exterior:		0	0				
North:		0	0				
East:		0	0				
South:		0	0				
West:		0	0				
Interior:		0	0				
Nonbearing Walls and Partitions:		0	0				
Exterior walls:		0	0				
North:		0	0				
East:		0	0				
South:		0	0				
West:		0	0				
Interior walls and partitions:		0	N/A				
Floor Construction (including supporting beams and joists):		0	N/A				
Roof Construction (including supporting beams and joists):		0	0				
Shaft Enclosures – Exit:		0	N/A				
Shaft Enclosures – Other:		0	N/A				
Corridor Separation:		0	0				
Occupancy Separation:		0	0				
Party/Fire Wall Separation:		0	N/A				
Smoke Barrier Separation:		N/A	N/A				
Tenant Separation:		N/A	N/A				
Incidental Use Separation:		N/A	N/A				

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS:

Emergency Lighting: (1006) ☐ No ☒ Yes
Exit Signs: (1011) ☐ No ☒ Yes
Fire Alarm: (907) ☐ No ☒ Yes
Smoke Detection Systems: ☐ No ☒ Yes
Panic Hardware: ☐ No ☒ Yes

EXIT REQUIREMENTS:

NUMBER AND ARRANGEMENT OF EXITS

Floor, Room or Space Designation	Minimum Number of Exits[2] Required	Minimum Number of Exits[2] Shown on Plans	Travel Distance (Feet) Allowable Travel Distance (Table 1015.1)	Travel Distance (Feet) Actual Travel Distance Shown on Plans	Arrangement Means of Egress[1,3] (Section 1014.2) Required Distance Between Exit Doors (Feet)	Arrangement Means of Egress[1,3] (Section 1014.2) Actual Distance Shown on Plans (Feet)
STORAGE AREA	1	1	200 (100)	72	100* *1018.2 BLDS WITH ONE EXIT	72

[1] Corridor dead ends (Section 1016.3) *(note: Occupancy A – load served by corridor greater than 30 with sprinkler sys. = 0 fire-resist. Corridor rating.)*
[2] Single exits (Table 1018.2) *(note: N/A building has more than one exit)*
[3] Common Path of Travel (Section 1013.3) *(note:Must not exceed 75 feet)*

EXIT WIDTH

Use Group or Space Description	(A) Area[1] (Sq Ft)	(B) Area[1] per Occupant (Table 1004.1.2)	Calculated Occupant Load	(C) Egress Width per Occupant (In) (Table 1005.1) Stair	(C) Egress Width per Occupant (In) (Table 1005.1) Level	Exit Width (In)[2,3,4,5,6] Required Width (Section 1005.1) (A÷B) x C Stair	Exit Width (In)[2,3,4,5,6] Required Width (Section 1005.1) (A÷B) x C Level	Exit Width (In)[2,3,4,5,6] Actual Width Shown on Plans Stair	Exit Width (In)[2,3,4,5,6] Actual Width Shown on Plans Level
STORAGE	3,887	300	13	N/A	19"	N/A	44"	N/A	44"

[1] See Table 1004.1.2 to determine whether net or gross area is applicable. See definition "Area, Gross" and "Area, Net" (Section 1002)
[2] Minimum stairway width (Section 1005.1), min. corridor width (Section 1016.2), min. door width (Section 1018.1)
[3] Minimum width of exit passageway (Section 1020.2)
[4] See Section 1004.5 for converging exits.
[5] The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1005.1)
[6] Assembly occupancies (Section 1024)

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Wind (I_w) _____
Snow (I_s) _____
Seismic (I_E) _____
Live Loads: Roof _____ psf.
Mezzanine _____ psf.
Floor _____ psf.
Snow Load: _____ psf.
Wind Load: Basic Wind Speed _____ mph. (ASCE-7-02)
Exposure Category
Wind Base Shears (for MWFRS) Vx = _____ Vy = _____

SEISMIC DESIGN CATEGORY A *
Compliance with Section 1616.4 only? ☐ Yes ☐ No

SEISMIC DESIGN CATEGORY: ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Seismic Use Group: _____
Spectral Response Acceleration: S_S: _____ %g S_1: _____ %g
Site Classification: _____ ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system (check one)
_____ Bearing Wall _____ Dual w/Special Moment Frame
_____ Building Frame _____ Dual w/Intermediate R/C or Special Steel
_____ Moment Frame _____ Inverted Pendulum
***Seismic base shear** V_S = _____ V_E = _____
***Analysis Procedure** _____ Simplified _____ Equivalent Lateral Force _____ Modal
Architectural, Mechanical, Components anchored? _____

LATERAL DESIGN CONTROL: Earthquake _____ Wind _____

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report): _____ psf. See Report in Specifications
Presumptive Bearing capacity: _____ psf.
Pile size, type, and capacity: _____

PLUMBING FIXTURE REQUIREMENTS

Use		Water Closets Male	Water Closets Female	Urinals	Lavatories Male	Lavatories Female	Showers/ Tubs	Drinking Fountains Regular	Drinking Fountains Accessible
	Existing	1	1		1	1	0	0	0
	New	0	0		0	0	0	0	0
	Required	0*	0*		0*	0*	0	0 *	0*

(SEE INT'L PLUMBING CODE TABLE 403.1 EXEMPTION 'N')

ACCESSIBLE PARKING

Lot or Parking Area	Total # of Parking Spaces Required	Total # of Parking Spaces Provided	# of Accessible Spaces Provided Regular with 5' Access Aisle	# of Accessible Spaces Provided Van Spaces with 8' Access Aisle	Total # Accessible Provided
**THIS STRUCTURE DOES NOT HAVE OCCUPABLE SPACE*	0	0	0	0	0
Total	0	0	0	0	0

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DFS, ICC, etc., describe below)

_____

_____

_____

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.

THERMAL ENVELOPE:
Method of Compliance:
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget
Roof/ceiling Assembly: (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Skylights in each assembly:
U-Value of skylight:
total square footage of skylights in each assembly:
Exterior Walls: (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Openings (windows or doors with glazing):
U-Value of assembly:
shading coefficient:
projection factor:
low e required, if applicable:
Door R-Values:
Walls adjacent to unconditioned space: (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Openings (windows or doors with glazing):
U-Value of assembly:
Low e required, if applicable:
Door R-Values:
Walls below grade: (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Floors over unconditioned space: (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Floors slab on grade:
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
horizontal/vertical requirement:
slab heated:

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT:
Method of Compliance:
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget
Lighting schedule:
lamp type required in fixture:
number of lamps in fixture:
ballast type used in the fixture:
number of ballasts in fixture:
total wattage per fixture:
total interior wattage specified vs. allowed:
total exterior wattage specified vs. allowed:
Equipment schedules with motors: (not used for mechanical systems)
motor horsepower:
number of phases:
minimum efficiency:
motor type:
# of poles:

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT:
Method of Compliance:
☐ Prescriptive ☐ Energy Cost Budget
Climate Zone: _____
Thermal Zone: _____
winter dry bulb:
summer dry bulb:
Interior design conditions:
winter dry bulb:
summer dry bulb:
relative humidity:
Building heating load:
Building cooling load:
Mechanical Spacing Conditioning System:
Unitary:
description of unit:
heating efficiency:
cooling efficiency:
heat output of unit:
cooling output of unit:
Boiler:
total boiler output (if oversized, state reason.):
Chiller:
total chiller capacity (if oversized, state reason.):
List equipment efficiencies:

Equipment schedules with motors: (mechanical systems)
motor horsepower:
number of phases:
minimum efficiency:
motor type:
# of poles:

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Salt Dome - City of Durham

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REVISIONS

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DATE: 8-19-08

Building Code Summary

A002

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